
Data administration

This chapter describes the data administration procedures for the DTI feature. These include adding, changing, removing, and querying

- the DTI feature
- the CPI application of DTI

The information presented here assumes the reader is familiar with the general principles of data administration on the Meridian 1 as described in *X11 software management* (553-3001-300).

DTI has an impact on the following Service Change and Print programs. For a complete description of these programs, see the *X11 input/output guide* (553-3001-400).

LD 11	SL-1 Telephones
LD 14	Trunks
LD 16	Route
LD 17	Configuration
LD 20	Print Routine 1
LD 21	Print Routine 2
LD 22	Print Routine 3
LD 25	Move Data Blocks
LD 73	Digital Trunk Interface
LD 81	Features/Stations Print

DTI data administration

A more detailed explanation of maintenance and out-of-service thresholds is located in *Digital Trunk Interface/Computer-to-PBX Interface maintenance* (553-2811-500). Also, refer to the *X11 input/output guide* (553-3001-400) for a complete listing and description of software programs.

Prompt	Response	Comments
Step 1	Gather data for the DTI thresholds and counters. Response to the following prompts in LD 73 is required. Defaults are in parentheses.	
REQ	NEW, CHG, PRT, OUT, END	Action Request (create, modify, print, remove data, or terminate program).
TYPE	DDB	Digital data block.
CEQT	Yes, No	Clock Controller equipped. Prompted for MS, ST, RT, N, NT, XN, or XT. Defaults to NO if response to REQ = NEW. Otherwise, defaults to previous value.
PREF	0-159	Primary reference source for clock synchronization controller. Use <cr> for free-running mode.
SREF	0-159	Secondary reference source for clock synchronization controller. Prompted only if PREF is not free-run. Use <cr> for free-running mode.
TRSH	0-15	Create, change, or remove a DTI threshold telephone. This number is entered in LD 17 when defining the DTI loop. Use Xxx to remove TRSH (LD 17 DLOP/TRSH associated with this TRSH must be removed first). See Step 2.
RALM	1-(3)-128	Yellow (remote) alarm/clear threshold. This is the number of "remote alarm clear" signals received in 24 hours. If the threshold is reached, the DTI/PRI must be restored to service manually.
BIPC	0-(2)-128	24-hour bit rate violation threshold. If 0 is entered, there is no limit on number of times trunk can be taken out and automatically restored to service. See the <i>X11 input/output guide</i> (553-3001-400).

Note: Automatic restoration is available only with Release 12 and later software.

Prompt	Response	Comments
LFAC	0-(3)-128	24-hour loss of frame alignment threshold. If 0 is entered, trunks will be restored to service automatically.
BIPV	1-(3)-4, 1-(2)-4	Bit error rate (bipolar violation and CRC) monitoring limits. Maintenance threshold. Out-of-service threshold.
SRTK	1-(5)-24, 1-(30)-3600	Frame slip/tracking/monitoring limits. Maintenance threshold, the minimum time, in hours, between slips. Out-of-service threshold, the maximum number of slips per hour.
SRNT	1-(15)-1024, 1-(3)-1024	Frame slip/free run (non-tracking)/monitoring limits Maintenance threshold, the minimum time, in seconds, between 10 consecutive slips. When the threshold is reached, warnings are output to the maintenance TTY. Out-of-service threshold, the minimum time, in seconds, between 10 consecutive slips. When the threshold is reached, the DTI loop is taken out of service and a minor alarm is raised.
Note: Automatic restoration is available only with Release 12 and later software. See <i>Digital Trunk Interface/Computer-to-PBX Interface maintenance</i> (553-2811-500) for a description.		
SRIM	1-127	Improvement timer in minutes.
SRMM	1-(2)-127	Improvement criteria. If non-tracking mode maintenance threshold is exceeded SRMM or fewer times in duration of SRIM, trunks are returned to service. If not, timer is restarted and monitoring continues.
LFAL	1-(17)-10240 1-(511)-1024 0	Loss of frame alignment monitoring limits. Maintenance threshold. Out-of-service threshold, the number of frame losses in 24 hours.
Step 2	Gather data to add, modify, or remove a digital trunk loop. The following prompts in LD 17 require a response. Defaults are in parentheses.	
REQ	ADD, CHG, OUT	Action Request (add, change, or remove data).
TYPE	CFN	Configuration data block.
CEQU	Yes, (No)	Change CE parameters.
DLOP	III dd ff	Digital Trunk loop options. III = network loop number 0-159. dd = number of data calls 0-(24). ff = frame format D2, D3, D4, or ESF. The default for frame format (ff) is ESF if prompt MODE is set to PRI; D3 if MODE is set to DTI or LINK.

Prompt	Response	Comments
Note: ESF can be specified for the QPC720 using X11 release 12 and later software.		
MODE	TRK, LINK	The mode in which the DTI hardware will be used. TRK = Digital Trunk mode, LINK = Digital Link mode.
LCMT	B8S, AMI	The line coding method. B8S = B8ZS binary 8 zero code substitution. AMI = B7 zero substitution. The default is B8S if the frame format is ESF; otherwise, the default is AMI.
YALM	DG2, FDL	The Yellow Alarm Pattern. DG2 = Digit 2. FDL = Facility Data Link. The default is FDL if the frame format is ESF; otherwise, the default is DG2.
TRSH	0-15	Digital Trunk threshold telephone. Enter the threshold telephone defined in LD 73.
DTIC	0-159	The starting network loop slot occupied by the DTI card. It marks, as occupied, the loop slots taken up by the DTI card. On non-network loops, enter <cr> and ignore the message SCH 2035.
OVLY	Yes, (No)	Change overlay area options.
SID	xxxx	System ID number. The SID is used for polling a Meridian 1 for ACD, CDR, and Traffic reports.
DROL	60	Include DTI Hardware diagnostic in daily routines (LD 60).

Prompt	Response	Comments
Step 3	Gather data to add, change, or remove a Digital Trunk route. Response to the following prompts in LD 16 is required. Defaults are in parentheses.	
REQ	NEW, CHG, OUT	Action Request (create, modify, or remove data).
TYPE	RDB	Route date block.
CUST	0-99	Customer number.
ROUTE	0-511	Route number.
	0-511 ¹⁴⁺ , 0-127 ¹⁴⁺	For System Options NT, RT, XN, ST, 51, 61, and 71 (R14). For all other machine types.
TKTP	aaa	Trunk route type.
	COT	Central Office trunk route.
	FEX	Foreign Exchange trunk route.
	WAT	Wide Area Trunk route.
	DID	Direct Inward Dialing trunk route.
	TIE	TIE trunk route.
SAT	Yes, (No)	Trunk route via Earth orbiting satellite transmission. This prompt has no relation to the trunk route function connecting a main PBX to a satellite PBX.
DTRK	Yes, (No)	Digital trunk route; (must be Yes).
DSEL		Digital trunk route selection. Prompted if response to TKTP is TIE and DTRK is YES.
	DTA, VCE, TDN, (VOD)	Data only, Voice only, Transparent Data Networking, (Voice or Data route).

Prompt	Response	Comments
PTYP		Port type at far end.
	Analog Tie trunk routes	
	AST	Analog satellite PBX TIE trunk or ESN satellite PBX TIE trunk.
	(ATT)	Analog Tie trunks.
	AOT	Analog Tie trunk, used instead of "ATT" whenever the PBX has one or more satellite trunk routes (DST) to any digital satellite PBX that includes OPX telephones.
	Digital Tie trunk routes	
	DCT	Combination satellite PBX TIE trunk.
	DST	Digital satellite PBX Tie trunk.
	(DTT)	Digital or combination Tie trunk.
	Analog CO trunk routes	
	(ACO)	Analog CO trunk.
	ATO	Analog Toll Office trunk.
	Digital CO trunk routes	
	(DCO)	Digital or combination CO trunk.
	DTO	Digital or combination Toll Office trunk.
AUTO	Yes, (No)	Auto-terminate must be NO if response to DSEL was VOD.
SIGO	aaa	ESN signaling arrangement. Prompted if the network signaling package is equipped, voice channels are configured VOD, and response to TKTP was TIE. The allowed values are as follows:
	STD	Standard signaling arrangement.
	ESN2	Supports NCOS, TCOS, and CCBQ call types.
	ESN3	Supports Network Call Transfer, Satellite Link Control, and all ESN2 call types.
	ESN5	Supports DTI data calls plus all other call types; not allowed if response to AUTO is Yes.
	EN19	Supports Transparent Data Networking and all ESN5 call types.
	ETN	Provides Electronic Tie network signaling arrangement.
STYP	SDAT, STDN	If Standard signaling arrangement (SIGO=STD). Uses Standard Data Signaling or Transparent Data Networking Signaling.
MANO	Yes, (No)	Manual outgoing trunk route. Must be NO if response to DSEL was VOD or if response to SIGO was ESN5. Define the manual DN in LD 14 (prompt MNDN).

Prompt	Response	Comments
Step 4	Gather data to add, change, move, or remove a Digital Trunk. Response is required to the following prompts in LD 14 . Defaults are in parentheses.	
REQ	NEW, CHG, MOV, OUT, END	Action Request (create, modify, move TN, remove data block, or terminate LD 14).
TYPE	aaa	Trunk type.
	COT	Central Office Trunk data block.
	FEX	Foreign Exchange trunk data block.
	WAT	WATS trunk data block.
	DID	Direct Inward Dialing trunk data block.
	TIE	TIE trunk data block.
		See the <i>X11 input/output guide</i> (553-3001-400) for more options.
TN	0-511, 1-24	Network loop, DTI channel.
SFEX	Yes, (No)	Special digital FEX trunk (prompted only for digital FEX trunks).
TOTN	0-150, 1-24	Network loop, unassigned DTI channel; move to an unassigned channel on the same Network loop.
RTMB	0-127, 1-254	Route number (cannot be 31), member number.
ATDN	xxxx	Auto-terminate DN at which the trunk is to automatically terminate. If response to DSEL in LD 16 is VOD any valid DN is acceptable. If response is VCE, the DN must be a voice station (telephone or attendant). If response is DTA, the DN must be a data terminal.
MNDN	xxxx	Manual Directory Number. If response to DSEL in LD 16 is VOD, any valid DN is acceptable. If response is VCE, the DN must be a voice station (telephone or attendant). If response is DTA, the DN must be a data terminal.
SIGL	aaa	Trunk signaling for TIE or PAG trunks.
	DX2, DX4, EAM, EM4, GRD, LDR, LOP, OAD	2-Wire and 4-Wire duplex. E&M 2-Wire and E&M 4-Wire. Ground Start, Loop Dial Repeating. Loop Start, Outgoing Automatic Incoming Dial.
STRI	aaa	Incoming start arrangement.
	DDL, IMM, OWK, WNK	Delayed dial, Immediate dial. Off-hook Wink, Wink.

Prompt	Response	Comments
STRO	aaa	Outgoing start arrangement.
	DDL, IMM, OWK, WNK	Delayed dial, Immediate dial. Off-hook Wink, Wink.
SUPN	Yes, (No)	Answer and disconnect supervision required.
CLS		Class of service.
	DTN, (DIP)	Digitone, (Dial Pulse).
Step 5	Gather data for each Meridian 1 telephone that is to be a data call telephone. Response is required to the following prompts in LD 11 . Defaults are in parentheses.	
REQ	aaa	Action request.
	CHG,	Modify existing data.
	CPY 1-32	Copy a telephone template to add 1-32 new telephones.
	END, MOV,	Exit LD 11; Move from one TN to another.
	MOV PAIR	Move voice and data TNs.
	NEW, OUT	Add new data to the system; Remove data block.
TYPE	SL1	Define a Meridian 1 telephone or M11909 telephone.
TN	Ill s cc u	Terminal number: loop (0-159), shelf (0-3), card (1-10), unit (0-15) See prompt SFMT when using the copy command.
TOTN	Ill s cc u	Destination TN. New loop, shelf, card, and unit when telephone data is to be moved to a new TN.
CLS	DTA, (VCE)	Data terminal, (Voice terminal). The default is DTA if a digital telephone is defined and TN unit is 8-15. The default is VCE if a digital telephone is defined and TN unit is 0-7.

CPI data administration

CPI is frequently connected to a computer by a direct cable. To restore service automatically with a direct connection, set all maintenance thresholds to their least sensitive values:

RALM	—	128
BIPC	—	128
LFAC	—	128
BIPV	—	1
SRTK	—	1
SRNT	—	1
LFAL	—	10240

Note 1: If CPI uses a carrier facility requiring an NCTE or Clock Controller, follow the DTI instructions for NCTEs and Clock Controllers.

Note 2: For detailed information on setting Error Thresholds, refer to LD 73 in the *X11 input/output guide* (553-3001-400).

Prompt	Response	Comments
1		Gather data to add, change, or remove a CPI Digital Trunk Loop. Response to the following prompts in LD 17 is required. Defaults are in parentheses.
REQ	NEW, OUT, CHG, END	Add data, remove data, change data, or end LD 17.
TYPE	CFN	Configuration data block.
CEQU	Yes	Change CE parameters.
DLOP	lll dd ff	Digital Trunk loop options. lll = network loop number 0-159. dd = number of data calls 0-(24). ff = frame format D2, D3, D4, or ESF. The default for frame format (ff) is ESF if prompt MODE is set to PRI; D3 if MODE is set to DTI or LINK.
DTIC	0-159	The starting network loop slot occupied by the DTI card. It marks, as occupied, the loop slots taken up by the DTI card. On non-network loops, enter <cr> and ignore the message SCH 2035.
OVLY	Yes	Change overlay area options.
SID	xxxx	System ID number. The SID is used for polling a Meridian 1 for ACD, CDR, and Traffic reports.
DROL	60	Include DTI Hardware diagnostic in daily routines.